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April 14, 2011

Valmichael Leos  
EPA Project Coordinator (6SF-RA)  
United States Environmental Protection Agency  
Region 6  
1445 Ross Avenue, Suite 1200  
Dallas, Texas 75202

Re: San Jacinto River Waste Pits Superfund Site Time Critical Removal Action  
Formal Response to USEPA letter dated April 8, 2011  
Re: USEPA Concerns about Displacement of Waste Sludge Due to Construction-  
Related Activities  
CERCLA Docket No. 06-12-10

Project Number: 090557-01

Dear Mr. Leos:

On behalf of International Paper Company and McGinnes Industrial Maintenance Corporation (the Respondents), and as requested in USEPA's April 8, 2011 letter to the Respondents' Project Coordinator, this letter provides a formal response to the concerns expressed by USEPA regarding observed sediment displacement related to ongoing construction activities for the Time Critical Removal Action (TCRA), San Jacinto River Waste Pits (SJRWP) Superfund Site (the Site).

## **Background**

The Respondents' construction contractor, USA Environment, LP (USA), has been constructing a cap at the Site in accordance with the approved Removal Action Work Plan (RAWP). Construction operations have been occurring from both the water-side, through a

marine subcontractor to USA, and from the land-side of the SJRWP. The water-side placement operations that are occurring from barges in the deeper portions of the eastern impoundment of the SJRWP (“Eastern Cell”) have been going as planned, and there is no evidence of subgrade displacement in those areas, based on daily survey measurements or visual observations when the tide is low.

Land-side placement activities have included construction of two test area access points within the interior portions of the Eastern Cell and western impoundment of the SJRWP (“Western Cell”). The purpose of the access points is to facilitate equipment reach to clear and grub the Western Cell and for the placement of the cap materials in the Eastern and Western Cells. The location and extent of the two access points are shown in Figure 1 (attached). In constructing these access points, the loads imposed by the rock and the earthwork equipment used for the access points have displaced some of the underlying soft materials in the immediate vicinity of the access point. It should be noted however, that this displacement has not resulted in the soft materials entering the water column.

As demonstrated by the geotechnical evaluation provided in the RAWP and the observed performance of the cap constructed from the water-side, the design of the removal action is satisfactory in that the *in situ* sediment has sufficient strength to support the weight of the cap. The issues that have been observed with soft sediment displacement are related to the construction equipment and techniques that the contractor has attempted to date.

Specifically, the additional loading from the thicker sequence of fill materials combined with the large earthwork equipment that is being used to build the access points are the primary causes for the observed displacement. Displacements have not been observed until after the design thickness of the cap section has been exceeded by approximately 1 to 2 feet.

The occurrence of soil displacement in soft soils is not an unusual occurrence – however, continued displacement of this nature is undesirable. The phenomenon is localized around the test interior access points, and results in changes to mudline elevation in the immediate vicinity of the displacement, but does not represent an adverse environmental risk or affect conditions in the larger river environment. The project team believes that the cap design can accommodate these observed changes in mudline elevation, with no compromise in the

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integrity or effectiveness of the cap. The localized displacements will be covered by fabric and armor cap material, as required by the RAWP, during the course of construction. The final product will meet the performance requirements of the TCRA.

USEPA posed a series of questions in their April 8, 2011 letter. A response is provided for each question below, considering the causal factors described above.

***What is the current course of action given the recent displacement of waste?***

Initial displacement of sediments was observed adjacent to the constructed access point in the Eastern Cell after several days of work from the land-side of the SJRWP. Once this initial displacement was observed, the contractor was instructed to re-evaluate its construction methods and to modify its approach and/or equipment to prevent and/or minimize further displacement. The contractor attempted to use mitigating measures over the course of several days; however, these measures were ultimately unsuccessful in preventing the observed displacement. At that point, the contractor stopped construction from the access point in the Eastern Cell until an alternate approach could be developed.

In the Western Cell, the contractor noted soft conditions and conferred with the project team as to whether a similar displacement could be expected when working in this area. It was decided that an initial test access point would be constructed and would include a layer of geogrid and geotextile to determine if this could spread the load of the construction equipment while limiting displacement of underlying materials. Initially the access point performed well during construction with a smaller piece of equipment, and facilitated access to the central part of the Western Cell where more solid ground is present. However, repeated loading on the access point from heavier equipment used to clear the center of the Western Cell resulted in displacement of the soft substrate around the access point. After the displacement was observed, at approximately the same time that USEPA observed and reported on these conditions (as described in their April 8, 2011 letter), the contractor stopped use of the access point, and was instructed to consider alternate approaches to placing the cap in the Western Cell.

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At this time, the contractor is not actively using either access point. Construction continues in other areas of the Site that are accessible either from the water-side, or from the land-side using established corridors such as the central and southern berms to keep the project on schedule. In parallel with ongoing construction, the contractor and project team are meeting on a regular basis to discuss potential options for modifying operations and for moving forward with construction in recognition of the time critical nature of the project. The contractor will be presenting its plan to the project team during the week ending April 15, 2011.

***What monitoring or engineering controls are in place that verifies that the displacement of waste is not impacting the San Jacinto River beyond the 1966 berm location?***

Figure 1 depicts the limits of soft substrate displacement development in the Eastern and Western Cells. In both areas, the displacement is limited to the immediate vicinity of the test access points and is well within the 1966 berm location. These observations are being verified and checked on a regular basis through progress surveys, and by comparing the pre-construction bathymetry and topography to the current bathymetry and topography. The pre- and post-construction bathymetry comparisons have shown that the cap is performing as designed and significant substrate displacements are not occurring. Because the construction practices that generated the displacement have been stopped, there is no mechanism that would cause further displacement beyond what has been already observed at the Site. There is no evidence that any waste material has entered the water.

***Is there a change needed in the design of the removal action in order to address the displacement of waste?***

The offshore cap construction technique in the deeper portions of the Eastern Cell has been demonstrated to be successful and has not caused sediment displacement. Based on the success of this approach, the contractor is modifying its construction approach (equipment and methods) to manage future cap placement in shallower areas of the Eastern Cell using the offshore cap construction technique. USA's marine subcontractor believes that it may be able to access additional areas of the Eastern Cell by lightly-loading their material barge to accommodate shallow water conditions, and by working during higher tidal stages. This

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would result in slower production compared to the marine work that has been performed so far, but would not require construction loads to be applied directly to the *in situ* sediment surface. Reducing construction loads on the sediments should eliminate sediment displacement.

In addition, Respondents' contractor will be modifying its construction approach in the Western Cell so that it minimizes sediment displacement. There are several approaches being considered, and one or more of these strategies may ultimately be employed to complete construction of the cap:

- Starting at the northern boundary of the Western Cell and working south and east: this would result in any potential displacement moving materials towards the land and berm instead of the water. Sequencing the work to reduce the number of traffic passes over the ground surface. The soils in the Western Cell are sensitive and subject to potential strength loss when subjected to repeated loading. By limiting the number of passes, and/or reducing the loads applied during each pass (e.g., with smaller equipment), the contractor can minimize displacement and reduce the potential for strength loss in the *in situ* soils.
  - Cutting-off tidal exchange in the Western Cell. By limiting the intrusion of water at higher tides, the contractor may be able to dry the surface of the Western Cell somewhat to improve access and stability.
  - Using additional stabilizing methods for the Western Cell ground surface. The contractor may elect to use additional stabilizing fill, geogrid, and/or stabilizing reagent, to create a firmer working platform from which to install the geomembrane and construct the cap.
  - Using alternate equipment in the Western Cell. Lightweight and/or low ground pressure equipment, and/or the use of marsh buggies may be considered to construct the cap.
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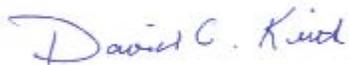
***Does addressing the waste displacement with an amended design affect the completion date of the entire project?***

As previously stated, the project team believes that a change to the design presented in the RAWP is not necessary. Changes are required in equipment and/or construction methods currently being used to place the cap. While cap construction is the critical path to project completion, the contractor has not needed to stop work related to these issues as of April 14, 2011, and the project team does not believe that the existing project completion date needs to be modified at this time. However, based on the ultimate method or methods selected to construct the cap, our assessment of potential schedule impacts may change.

While the observed sediment displacement has not required a modification to the project schedule, there is still the potential for future construction and/or weather-related issues that might necessitate a change to the TCRA completion date. In the event that any of these conditions occur, USEPA will be notified as soon as practicable, in accordance with the requirements of the TCRA Administrative Order on Consent.

Please do not hesitate to contact us if you have further questions.

Sincerely,



David Keith, Project Coordinator  
Anchor QEA, LLC

Cc: Philip Slowiak and Brian Jones – International Paper Company  
Andrew Shafer and March Smith – McGinnes Industrial Maintenance Corporation  
Ed Fendley – USA Environment

Attachments:

Figure 1 – Locations of Observed Sediment Displacement

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